

### REMARKS

Claims 14, 16-21, and 23-26 stand rejected under 35. U.S.C. 112, first paragraph as not appropriately complying with the written description requirement. Claims 14, 16-21, and 23-26 stand rejected under 35. U.S.C. §103(a) as being unpatentable over non-patent publication by Hamer titled "Acceptance Testing of Electrical Motors and Generators" (hereinafter Hamer) in view of US patent application publication No. 2003/0117144 (hereinafter Sutton) and further in view of US patent No. 5,097,241 (hereinafter Smith). Reconsideration of the rejections, and allowance of all the pending claims is respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-13, 15 and 22 were previously canceled. Thus, claims 14, 16-21 and 23-26 are presently pending.

#### Discussion of 35. U.S.C. 112, First Paragraph Rejections

Applicant will proceed to point out where support in the disclosure (express or implied) is found for each of the structural and/or operational relationships of the claimed invention.

Independent claim 14 is directed to a laminated core testing device to test a laminated core in a generator. See lines 1-4 of paragraph 0013 of the US patent application publication of the present invention (hereinafter referred to as USPAP). A field winding 10 (FIG. 1) that lies in parallel with an axis of rotation of the generator and is connected to a high-voltage testing device 13 that produces alternating current during a test performed to simulate an operational state of the generator. See paragraph 0031 of USPAP, see also paragraph 0036 of USPAP. An infrared image detection device 14 is designed to detect infrared radiation during the simulated operational state of the generator. See lines 6-7 of paragraph 0015 of USPAP. The high-voltage testing device is configured to simulate the operational state of the generator (see paragraph 0036 of USPAP) by outputting a fundamental frequency and a power in single-phase form at an output voltage of at least 400 V that can be regulated. See paragraph 0032 of USPAP. The high-voltage testing device comprises a frequency converter (see paragraph 0033 of USPAP) for converting the fundamental frequency to a frequency that is greater than 50 Hz to energize the field winding

at the greater frequency value and cause a thermal response indicative of at least one hot spot in the laminated core during the simulated operational state of the generator. See paragraph 0036 of USPAP. See also paragraph 0043 and FIG. 2 of USPAP.

Independent claim 21 is directed to a high-voltage testing device for testing a laminated core in a generator. See lines 1-4 of paragraph 0013 of USPAP. A single-phase output signal is regulated during a test to simulate an operational state of the generator. See paragraph 0014 of USPAP. An output voltage of at least 400 V has a fundamental frequency. The high-voltage testing device comprises a frequency converter (see paragraph 0033 of USPAP) for converting the fundamental frequency to a frequency that is greater than 50 Hz to simulate the operational state of the generator. See paragraph 0014 of USPAP. See also paragraph 0036 of USPAP. A field winding 10 is energized at the greater frequency value to cause during the simulated operational state of the generator a thermal response indicative of at least one hot spot in the laminated core. See paragraph 0036 of USPAP. See also paragraph 0043 and FIG. 2 of USPAP. The thermal response is detected by an infrared image detection device 14 configured to detect infrared radiation during the simulated operational state of the generator. See lines 6-7 of paragraph 0015 of USPAP.

Independent claim 26 is directed to method for testing for faults in a laminated core of a generator. This claim essentially comprises a method claim counterpart to the apparatus recited in claim 14. Accordingly, for the sake of avoiding pedantic redundancy, applicant believes it is not necessary to once again repeat the citations to USPAP noted above in connection with independent 14.

In addition to having pointed out where support in the disclosure is found for each of the structural and/or operational relationships of the claimed invention, applicant notes that M.P.E.P. 2163 II A cautions Examiners that “there is a strong presumption that an adequate written description of the claimed invention is present when the application is filed”. Additionally, as noted in M.P.E.P. II A 3 (a) an applicant's disclosure obligation varies according to the art to which the invention pertains. This application is not in an unpredictable or emerging art, where more evidence may be required to show possession of the claimed invention. In view of the totality of the foregoing considerations, applicant respectfully asserts that USPAP appropriately describes the claimed invention in sufficient detail that one skilled in the art can reasonably

conclude that the inventor had possession of the claimed invention. Therefore, the §112, first paragraph rejections should be withdrawn.

#### Discussion of 35. U.S.C. 103 Rejections

The Examiner correctly acknowledges that Hamer fails to describe or suggest each of the structural and/or operational relationships of the claimed invention. Sutton and Smith are applied to purportedly remedy the deficiencies of Hamer. However, as discussed in greater detail below, the principles of the Sutton reference are fundamentally incongruent with Hamer. Consequently, the Hamer/Sutton/Smith combination fails to constitute a *prima facie* combination under the §103 statutory requirements and the rejections should be withdrawn.

MPEP 2141.02(VI) states that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. In this case Sutton in particular deprecates prior art techniques that use infrared equipment to locate the hot spots. See Sutton paragraph 0005. Consistent with the objectives of Sutton, (e.g., away from techniques that use infrared equipment to locate the hot spots) Sutton describes a technique based on phase-detection that teaches away from techniques that use infrared equipment to locate the hot spots (i.e., teaches away from Hamer). More particularly, the technique of Sutton relates to a phase sensitive detector 110 arranged to resolve respective in-phase and quadrature components of a test signal in response to *an excitation signal having a frequency that exceeds the rated operating frequency of the stator*. The Examiner picks only the language in italics from Sutton and conveniently chooses to ignore the entirety of the Sutton reference. This is inconsistent with the foregoing MPEP requirements for appropriately sustaining a 103 rejection. On this basis alone, the Hamer/Sutton/Smith combination fails to constitute a *prima facie* combination under the §103 statutory requirements regarding the claimed invention.

Applicant additionally traverses the §103 rejections on an alternative basis of traversal. MPEP 2143.01(VI) states that if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In this case, combining Sutton (detecting in-phase and

quadrature components of a test signal to detect faults) with Hamer (use of infrared equipment to locate hot spots) would change the principle of operation of Hamer and therefore it cannot serve as a predicate for a sustaining a *prima facie* case of obviousness. Therefore, under either basis of traversal, the Examiner errs in not abiding by the Examination Procedures set forth in the M.P.E.P.

In view of the foregoing consideration, it is respectfully submitted that Hamer, Sutton and Smith fail to constitute a *prima facie* combination under the §103 statutory requirements regarding the claimed invention. Consequently, the Hamer/Sutton/Smith combination fails to obviate claim 14 under the §103 statutory requirements and this rejection should be withdrawn. Since claims 14 and 16-20 include the structural and/or operational relationships respectively recited in claim 14, it is also respectfully submitted that the Hamer/Sutton/Smith combination also fails to render unpatentable such dependent claims.

In view of the foregoing discussion regarding the Hamer/Sutton/Smith combination, it is respectfully submitted that such a combination also fails to obviate claim 21 (and claims depending there from) under the §103 statutory requirements and these rejections should be withdrawn.

Claim 26 is directed to a method for testing for faults in a laminated core of a generator. Claim 26 has been amended consistent with the structural and/or operational relationships discussed above in the context of independent claims 14 and 21. In view of the foregoing discussion regarding the Hamer/Sutton/Smith combination, it is respectfully submitted such a combination similarly fails to obviate claim 26 under the §103 statutory requirements and this rejection should be similarly withdrawn.

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Conclusion

It is respectfully submitted that each of the claims pending in this application recites patentable subject matter and it is further submitted that such claims comply with all statutory requirements and thus each of such claims should be allowed.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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